

SEQUENCE LISTING

<110> Foster, Donald C.
 Xu, Wenfeng
 Madden, Karen L.
 Kelly, James D.
 Sprecher, Cindy A.
 Brandt, Cameron S.
 Rixon, Mark W.
 Presnell, Scott R.
 Fox, Brian A.

<120> Soluble Interleukin-20 Receptor

<130> 99-107

<150> 60/171,966

<151> 1999-12-23

<150> 60/213,416

<151> 2000-06-22

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<212> PRT

<213> Homo sapiens

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Cys	Val	Ile	Ala	Thr	Asn	Leu	Gln	Glu	Ile	Arg	Asn	Gly	Phe	Ser	Asp
		35					40					45			
Ile	Arg	Gly	Ser	Val	Gln	Ala	Lys	Asp	Gly	Asn	Ile	Asp	Ile	Arg	Ile
	50					55				60					
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003331" 25/54/60

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			20					25					30		
Cys	Val	Ile	Ala	Thr	Asn	Leu	Gln	Glu	Ile	Arg	Asn	Gly	Phe	Ser	Asp
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Ile	Arg	Gly	Ser	Val	Gln	Ala	Lys	Asp	Gly	Asn	Ile	Asp	Ile	Arg	Ile
	50					55					60				
Leu	Arg	Arg	Thr	Glu	Ser	Leu	Gln	Asp	Thr	Lys	Pro	Ala	Asn	Arg	Cys
65					70					75					80
Cys	Leu	Leu	Arg	His	Leu	Leu	Arg	Leu	Tyr	Leu	Asp	Arg	Val	Phe	Lys
				85					90					95	
Asn	Tyr	Gln	Thr	Pro	Asp	His	Tyr	Thr	Leu	Arg	Lys	Ile	Ser	Ser	Leu
			100					105					110		
Ala	Asn	Ser	Phe	Leu	Thr	Ile	Lys	Lys	Asp	Leu	Arg	Leu	Cys	Leu	Glu
		115					120					125			
Pro	Gln	Ala	Ala	Val	Val	Lys	Ala	Leu	Gly	Glu	Leu	Asp	Ile	Leu	Leu
	130					135					140				
Gln	Trp	Met	Glu	Glu	Thr	Glu									
145						150									

<213> Homo sapiens

Leu	Lys	Thr	Leu	Asn	Leu	Gly	Ser	Cys	Val	Ile	Ala	Thr	Asn	Leu	Gln
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Glu	Ile	Arg	Asn	Gly	Phe	Ser	Asp	Ile	Arg	Gly	Ser	Val	Gln	Ala	Lys
			20					25					30		
Asp	Gly	Asn	Ile	Asp	Ile	Arg	Ile	Leu	Arg	Arg	Thr	Glu	Ser	Leu	Gln
		35					40					45			
Asp	Thr	Lys	Pro	Ala	Asn	Arg	Cys	Cys	Leu	Leu	Arg	His	Leu	Leu	Arg
	50					55					60				
Leu	Tyr	Leu	Asp	Arg	Val	Phe	Lys	Asn	Tyr	Gln	Thr	Pro	Asp	His	Tyr
65				70						75				80	
Thr	Leu	Arg	Lys	Ile	Ser	Ser	Leu	Ala	Asn	Ser	Phe	Leu	Thr	Ile	Lys
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 Asp Thr Asn Ile Asp Ile Arg Ile Leu Arg Thr Thr Glu Ser Leu Lys
 35 40 45
 Asp Ile Lys Ser Leu Asp Arg Cys Cys Phe Leu Arg His Leu Val Arg
 50 55 60
 Phe Tyr Leu Asp Arg Val Phe Lys Val Tyr Gln Thr Pro Asp His His
 65 70 75 80
 Thr Leu Arg Lys Ile Ser Ser Leu Ala Asn Ser Phe Leu Ile Ile Lys
 85 90 95
 Lys Asp Leu Ser Val Cys His Ser His Met Ala Cys His Cys Gly Glu
 100 105 110
 Glu Ala Met Glu Lys Tyr Asn Gln Ile Leu Ser His Phe Ile Glu Leu
 115 120 125
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 130 135 140
 Leu Arg Trp Met Glu Glu Met Leu
 145 150

<210> 7

<211> 144

<212> PRT

<213> Mus musculus

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 Leu Arg Thr Thr Glu Ser Leu Lys Asp Ile Lys Ser Leu Asp Arg Cys
 35 40 45
 Cys Phe Leu Arg His Leu Val Arg Phe Tyr Leu Asp Arg Val Phe Lys
 50 55 60
 Val Tyr Gln Thr Pro Asp His His Thr Leu Arg Lys Ile Ser Ser Leu
 65 70 75 80
 Ala Asn Ser Phe Leu Ile Ile Lys Lys Asp Leu Ser Val Cys His Ser
 85 90 95
 His Met Ala Cys His Cys Gly Glu Glu Ala Met Glu Lys Tyr Asn Gln
 100 105 110
 Ile Leu Ser His Phe Ile Glu Leu Glu Leu Gln Ala Ala Val Val Lys
 115 120 125
 Ala Leu Gly Glu Leu Gly Ile Leu Leu Arg Trp Met Glu Glu Met Leu
 130 135 140

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 Cys Val Ile Thr Ala Asn Leu Gln Ala Ile Gln Lys Glu Phe Ser Glu
 35 40 45
 Ile Arg Asp Ser Val Ser Leu Asp Arg Cys Cys Phe Leu Arg His Leu
 50 55 60
 Val Arg Phe Tyr Leu Asp Arg Val Phe Lys Val Tyr Gln Thr Pro Asp
 65 70 75 80
 His His Thr Leu Arg Lys Ile Ser Ser Leu Ala Asn Ser Phe Leu Ile
 85 90 95
 Ile Lys Lys Asp Leu Ser Val Cys His Ser His Met Ala Cys His Cys
 100 105 110
 Gly Glu Glu Ala Met Glu Lys Tyr Asn Gln Ile Leu Ser His Phe Ile
 115 120 125
 Glu Leu Glu Leu Gln Ala Ala Val Val Lys Ala Leu Gly Glu Leu Gly
 130 135 140
 Ile Leu Leu Arg Trp Met Glu Glu Met Leu
 145 150

<210> 9
 <211> 130
 <212> PRT
 <213> Homo sapiens

<400> 9
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 Arg Cys Cys Phe Leu Arg His Leu Val Arg Phe Tyr Leu Asp Arg Val
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 Phe Lys Val Tyr Gln Thr Pro Asp His His Thr Leu Arg Lys Ile Ser
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tct ggt ggt ttg cct aaa cct gca aac atc acc ttc tta tcc atc aac 383
Ser Gly Gly Leu Pro Lys Pro Ala Asn Ile Thr Phe Leu Ser Ile Asn
35 40 45

atg aag aat gtc cta caa tgg act cca cca gag ggt ctt caa gga gtt 431
Met Lys Asn Val Leu Gln Trp Thr Pro Pro Glu Gly Leu Gln Gly Val
50 55 60 65

aaa gtt act tac act gtg cag tat ttc ata tat ggg caa aag aaa tgg	479
Lys Val Thr Tyr Thr Val Gln Tyr Phe Ile Tyr Gly Gln Lys Lys Trp	
70 75 80	
ctg aat aaa tca gaa tgc aga aat atc aat aga acc tac tgt gat ctt	527
Leu Asn Lys Ser Glu Cys Arg Asn Ile Asn Arg Thr Tyr Cys Asp Leu	
85 90 95	
tct gct gaa act tct gac tac gaa cac cag tat tat gcc aaa gtt aag	575
Ser Ala Glu Thr Ser Asp Tyr Glu His Gln Tyr Tyr Ala Lys Val Lys	
100 105 110	
gcc att tgg gga aca aag tgt tcc aaa tgg gct gaa agt gga cgg ttc	623
Ala Ile Trp Gly Thr Lys Cys Ser Lys Trp Ala Glu Ser Gly Arg Phe	
115 120 125	
tat cct ttt tta gaa aca caa att ggc cca cca gag gtg gca ctg act	671
Tyr Pro Phe Leu Glu Thr Gln Ile Gly Pro Pro Glu Val Ala Leu Thr	
130 135 140 145	
aca gat gag aag tcc att tct gtt gtc ctg aca gct cca gag aag tgg	719
Thr Asp Glu Lys Ser Ile Ser Val Val Leu Thr Ala Pro Glu Lys Trp	
150 155 160	
aag aga aat cca gaa gac ctt cct gtt tcc atg caa caa ata tac tcc	767
Lys Arg Asn Pro Glu Asp Leu Pro Val Ser Met Gln Gln Ile Tyr Ser	
165 170 175	
aat ctg aag tat aac gtg tct gtg ttg aat act aaa tca aac aga acg	815
Asn Leu Lys Tyr Asn Val Ser Val Leu Asn Thr Lys Ser Asn Arg Thr	
180 185 190	
tgg tcc cag tgt gtg acc aac cac acg ctg gtg ctc acc tgg ctg gag	863
Trp Ser Gln Cys Val Thr Asn His Thr Leu Val Leu Thr Trp Leu Glu	
195 200 205	
ccg aac act ctt tac tgc gta cac gtg gag tcc ttc gtc cca ggg ccc	911
Pro Asn Thr Leu Tyr Cys Val His Val Glu Ser Phe Val Pro Gly Pro	
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gat	caa	tca	tca	gag	ttc	aag	gct	aaa	atc	atc	ttc	tgg	tat	gtt	ttg	1007	
Asp	Gln	Ser	Ser	Glu	Phe	Lys	Ala	Lys	Ile	Ile	Phe	Trp	Tyr	Val	Leu		
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ccc	ata	tct	att	acc	gtg	ttt	ctt	ttt	tct	gtg	atg	ggc	tat	tcc	atc	1055	
Pro	Ile	Ser	Ile	Thr	Val	Phe	Leu	Phe	Ser	Val	Met	Gly	Tyr	Ser	Ile		
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Tyr	Arg	Tyr	Ile	His	Val	Gly	Lys	Glu	Lys	His	Pro	Ala	Asn	Leu	Ile		
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ttg	att	tat	gga	aat	gaa	ttt	gac	aaa	aga	ttc	ttt	gtg	cct	gct	gaa	1151	
Leu	Ile	Tyr	Gly	Asn	Glu	Phe	Asp	Lys	Arg	Phe	Phe	Val	Pro	Ala	Glu		
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Lys	Ile	Val	Ile	Asn	Phe	Ile	Thr	Leu	Asn	Ile	Ser	Asp	Asp	Ser	Lys		
				310					315					320			
att	tct	cat	cag	gat	atg	agt	tta	ctg	gga	aaa	agc	agt	gat	gta	tcc	1247	
Ile	Ser	His	Gln	Asp	Met	Ser	Leu	Leu	Gly	Lys	Ser	Ser	Asp	Val	Ser		
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agc	ctt	aat	gat	cct	cag	ccc	agc	ggg	aac	ctg	agg	ccc	cct	cag	gag	1295	
Ser	Leu	Asn	Asp	Pro	Gln	Pro	Ser	Gly	Asn	Leu	Arg	Pro	Pro	Gln	Glu		
				340					345					350			
gaa	gag	gag	gtg	aaa	cat	tta	ggg	tat	gct	tcg	cat	ttg	atg	gaa	att	1343	
Glu	Glu	Glu	Val	Lys	His	Leu	Gly	Tyr	Ala	Ser	His	Leu	Met	Glu	Ile		
				355					360					365			
ttt	tgt	gac	tct	gaa	gaa	aac	acg	gaa	ggc	act	tct	ttc	acc	cag	caa	1391	
Phe	Cys	Asp	Ser	Glu	Glu	Asn	Thr	Glu	Gly	Thr	Ser	Phe	Thr	Gln	Gln		
				370					375					380			
gag	tcc	ctc	agc	aga	aca	ata	ccc	ccg	gat	aaa	aca	gtc	att	gaa	tat	1439	
Glu	Ser	Leu	Ser	Arg	Thr	Ile	Pro	Pro	Asp	Lys	Thr	Val	Ile	Glu	Tyr		
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<212> PRT

<213> Homo sapiens

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Val	Ser	Gly	Gly	Leu	Pro	Lys	Pro	Ala	Asn	Ile	Thr	Phe	Leu	Ser	Ile
		35					40					45			
Asn	Met	Lys	Asn	Val	Leu	Gln	Trp	Thr	Pro	Pro	Glu	Gly	Leu	Gln	Gly
	50					55					60				
Val	Lys	Val	Thr	Tyr	Thr	Val	Gln	Tyr	Phe	Ile	Tyr	Gly	Gln	Lys	Lys
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Trp	Leu	Asn	Lys	Ser	Glu	Cys	Arg	Asn	Ile	Asn	Arg	Thr	Tyr	Cys	Asp
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Phe	Tyr	Pro	Phe	Leu	Glu	Thr	Gln	Ile	Gly	Pro	Pro	Glu	Val	Ala	Leu
	130					135					140				
Thr	Thr	Asp	Glu	Lys	Ser	Ile	Ser	Val	Val	Leu	Thr	Ala	Pro	Glu	Lys
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Trp	Lys	Arg	Asn	Pro	Glu	Asp	Leu	Pro	Val	Ser	Met	Gln	Gln	Ile	Tyr
			165						170					175	
Ser	Asn	Leu	Lys	Tyr	Asn	Val	Ser	Val	Leu	Asn	Thr	Lys	Ser	Asn	Arg
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Thr	Trp	Ser	Gln	Cys	Val	Thr	Asn	His	Thr	Leu	Val	Leu	Thr	Trp	Leu
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Pro	Pro	Arg	Arg	Ala	Gln	Pro	Ser	Glu	Lys	Gln	Cys	Ala	Arg	Thr	Leu
225					230					235					240
Lys	Asp	Gln	Ser	Ser	Glu	Phe	Lys	Ala	Lys	Ile	Ile	Phe	Trp	Tyr	Val
				245					250					255	
Leu	Pro	Ile	Ser	Ile	Thr	Val	Phe	Leu	Phe	Ser	Val	Met	Gly	Tyr	Ser
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Ile	Tyr	Arg	Tyr	Ile	His	Val	Gly	Lys	Glu	Lys	His	Pro	Ala	Asn	Leu
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Glu	Lys	Ile	Val	Ile	Asn	Phe	Ile	Thr	Leu	Asn	Ile	Ser	Asp	Asp	Ser
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Lys	Ile	Ser	His	Gln	Asp	Met	Ser	Leu	Leu	Gly	Lys	Ser	Ser	Asp	Val
				325					330					335	
Ser	Ser	Leu	Asn	Asp	Pro	Gln	Pro	Ser	Gly	Asn	Leu	Arg	Pro	Pro	Gln
		340						345					350		
Glu	Glu	Glu	Glu	Val	Lys	His	Leu	Gly	Tyr	Ala	Ser	His	Leu	Met	Glu
	355						360					365			
Ile	Phe	Cys	Asp	Ser	Glu	Glu	Asn	Thr	Glu	Gly	Thr	Ser	Phe	Thr	Gln
	370					375					380				
Gln	Glu	Ser	Leu	Ser	Arg	Thr	Ile	Pro	Pro	Asp	Lys	Thr	Val	Ile	Glu
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Tyr	Glu	Tyr	Asp	Val	Arg	Thr	Thr	Asp	Ile	Cys	Ala	Gly	Pro	Glu	Glu
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Gln	Glu	Leu	Ser	Leu	Gln	Glu	Glu	Val	Ser	Thr	Gln	Gly	Thr	Leu	Leu
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Glu Ser Gln Ala Ala Leu Ala Val Leu Gly Pro Gln Thr Leu Gln Tyr
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 Ser Tyr Thr Pro Gln Leu Gln Asp Leu Asp Pro Leu Ala Gln Glu His
 450 455 460
 Thr Asp Ser Glu Glu Gly Pro Glu Glu Glu Pro Ser Thr Thr Leu Val
 465 470 475 480
 Asp Trp Asp Pro Gln Thr Gly Arg Leu Cys Ile Pro Ser Leu Ser Ser
 485 490 495
 Phe Asp Gln Asp Ser Glu Gly Cys Glu Pro Ser Glu Gly Asp Gly Leu
 500 505 510
 Gly Glu Glu Gly Leu Leu Ser Arg Leu Tyr Glu Glu Pro Ala Pro Asp
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 Trp Gly Leu Tyr Val Gln Met Glu Asn
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<212> PRT

<213> Homo sapiens

<400> 12

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 35 40 45
 Gln Lys Lys Trp Leu Asn Lys Ser Glu Cys Arg Asn Ile Asn Arg Thr
 50 55 60
 Tyr Cys Asp Leu Ser Ala Glu Thr Ser Asp Tyr Glu His Gln Tyr Tyr
 65 70 75 80
 Ala Lys Val Lys Ala Ile Trp Gly Thr Lys Cys Ser Lys Trp Ala Glu
 85 90 95
 Ser Gly Arg Phe Tyr Pro Phe Leu Glu Thr Gln Ile Gly Pro Pro Glu
 100 105 110
 Val Ala Leu Thr Thr Asp Glu Lys Ser Ile Ser Val Val Leu Thr Ala
 115 120 125
 Pro Glu Lys Trp Lys Arg Asn Pro Glu Asp Leu Pro Val Ser Met Gln
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<213> Homo sapiens
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Trp Thr Ser Leu Phe Met Trp Phe Phe Tyr Ala Leu Ile Pro Cys Leu
15 20 25

ctc aca gat gaa gtg gcc att ctg cct gcc cct cag aac ctc tct gta 146
Leu Thr Asp Glu Val Ala Ile Leu Pro Ala Pro Gln Asn Leu Ser Val
30 35 40

ctc tca acc aac atg aag cat ctc ttg atg tgg agc cca gtg atc gcg 194
Leu Ser Thr Asn Met Lys His Leu Leu Met Trp Ser Pro Val Ile Ala
45 50 55

cct gga gaa aca gtg tac tat tct gtc gaa tac cag ggg gag tac gag 242
Pro Gly Glu Thr Val Tyr Tyr Ser Val Glu Tyr Gln Gly Glu Tyr Glu
60 65 70 75

agc ctg tac acg agc cac atc tgg atc ccc agc agc tgg tgc tca ctc 290
Ser Leu Tyr Thr Ser His Ile Trp Ile Pro Ser Ser Trp Cys Ser Leu
80 85 90

act gaa ggt cct gag tgt gat gtc act gat gac atc acg gcc act gtg	338
Thr Glu Gly Pro Glu Cys Asp Val Thr Asp Asp Ile Thr Ala Thr Val	
95 100 105	
cca tac aac ctt cgt gtc agg gcc aca ttg ggc tca cag acc tca gcc	386
Pro Tyr Asn Leu Arg Val Arg Ala Thr Leu Gly Ser Gln Thr Ser Ala	
110 115 120	
tgg agc atc ctg aag cat ccc ttt aat aga aac tca acc atc ctt acc	434
Trp Ser Ile Leu Lys His Pro Phe Asn Arg Asn Ser Thr Ile Leu Thr	
125 130 135	
cga cct ggg atg gag atc acc aaa gat ggc ttc cac ctg gtt att gag	482
Arg Pro Gly Met Glu Ile Thr Lys Asp Gly Phe His Leu Val Ile Glu	
140 145 150 155	
ctg gag gac ctg ggg ccc cag ttt gag ttc ctt gtg gcc tac tgg agg	530
Leu Glu Asp Leu Gly Pro Gln Phe Glu Phe Leu Val Ala Tyr Trp Arg	
160 165 170	
agg gag cct ggt gcc gag gaa cat gtc aaa atg gtg agg agt ggg ggt	578
Arg Glu Pro Gly Ala Glu Glu His Val Lys Met Val Arg Ser Gly Gly	
175 180 185	
att cca gtg cac cta gaa acc atg gag cca ggg gct gca tac tgt gtg	626
Ile Pro Val His Leu Glu Thr Met Glu Pro Gly Ala Ala Tyr Cys Val	
190 195 200	
aag gcc cag aca ttc gtg aag gcc att ggg agg tac agc gcc ttc agc	674
Lys Ala Gln Thr Phe Val Lys Ala Ile Gly Arg Tyr Ser Ala Phe Ser	
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cag aca gaa tgt gtg gag gtg caa gga gag gcc att ccc ctg gta ctg	722
Gln Thr Glu Cys Val Glu Val Gln Gly Glu Ala Ile Pro Leu Val Leu	
220 225 230 235	
gcc ctg ttt gcc ttt gtt ggc ttc atg ctg atc ctt gtg gtc gtg cca	770
Ala Leu Phe Ala Phe Val Gly Phe Met Leu Ile Leu Val Val Val Pro	
240 245 250	
ctg ttc gtc tgg aaa atg ggc cgg ctg ctc cag tac tcc tgt tgc ccc	818
Leu Phe Val Trp Lys Met Gly Arg Leu Leu Gln Tyr Ser Cys Cys Pro	
255 260 265	

09745792 122200

gtg gtg gtc ctc cca gac acc ttg aaa ata acc aat tca ccc cag aag 866
 Val Val Val Leu Pro Asp Thr Leu Lys Ile Thr Asn Ser Pro Gln Lys
 270 275 280

tta atc agc tgc aga agg gag gag gtg gat gcc tgt gcc acg gct gtg 914
 Leu Ile Ser Cys Arg Arg Glu Glu Val Asp Ala Cys Ala Thr Ala Val
 285 290 295

atg tct cct gag gaa ctc ctc agg gcc tgg atc tca taggtttgcg 960
 Met Ser Pro Glu Glu Leu Leu Arg Ala Trp Ile Ser
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<212> PRT

<213> Homo sapiens

<400> 14

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 Ala Ile Leu Pro Ala Pro Gln Asn Leu Ser Val Leu Ser Thr Asn Met
 35 40 45
 Lys His Leu Leu Met Trp Ser Pro Val Ile Ala Pro Gly Glu Thr Val
 50 55 60
 Tyr Tyr Ser Val Glu Tyr Gln Gly Glu Tyr Glu Ser Leu Tyr Thr Ser
 65 70 75 80
 His Ile Trp Ile Pro Ser Ser Trp Cys Ser Leu Thr Glu Gly Pro Glu
 85 90 95
 Cys Asp Val Thr Asp Asp Ile Thr Ala Thr Val Pro Tyr Asn Leu Arg
 100 105 110
 Val Arg Ala Thr Leu Gly Ser Gln Thr Ser Ala Trp Ser Ile Leu Lys
 115 120 125
 His Pro Phe Asn Arg Asn Ser Thr Ile Leu Thr Arg Pro Gly Met Glu
 130 135 140
 Ile Thr Lys Asp Gly Phe His Leu Val Ile Glu Leu Glu Asp Leu Gly
 145 150 155 160
 Pro Gln Phe Glu Phe Leu Val Ala Tyr Trp Arg Arg Glu Pro Gly Ala
 165 170 175

09745792 122200

Glu Glu His Val Lys Met Val Arg Ser Gly Gly Ile Pro Val His Leu
 180 185 190
 Glu Thr Met Glu Pro Gly Ala Ala Tyr Cys Val Lys Ala Gln Thr Phe
 195 200 205
 Val Lys Ala Ile Gly Arg Tyr Ser Ala Phe Ser Gln Thr Glu Cys Val
 210 215 220
 Glu Val Gln Gly Glu Ala Ile Pro Leu Val Leu Ala Leu Phe Ala Phe
 225 230 235 240
 Val Gly Phe Met Leu Ile Leu Val Val Val Pro Leu Phe Val Trp Lys
 245 250 255
 Met Gly Arg Leu Leu Gln Tyr Ser Cys Cys Pro Val Val Val Leu Pro
 260 265 270
 Asp Thr Leu Lys Ile Thr Asn Ser Pro Gln Lys Leu Ile Ser Cys Arg
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 Arg Glu Glu Val Asp Ala Cys Ala Thr Ala Val Met Ser Pro Glu Glu
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 Leu Leu Arg Ala Trp Ile Ser
 305 310

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<211> 203

<212> PRT

<213> Homo sapiens

<400> 15

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 Thr Asn Met Lys His Leu Leu Met Trp Ser Pro Val Ile Ala Pro Gly
 20 25 30
 Glu Thr Val Tyr Tyr Ser Val Glu Tyr Gln Gly Glu Tyr Glu Ser Leu
 35 40 45
 Tyr Thr Ser His Ile Trp Ile Pro Ser Ser Trp Cys Ser Leu Thr Glu
 50 55 60
 Gly Pro Glu Cys Asp Val Thr Asp Asp Ile Thr Ala Thr Val Pro Tyr
 65 70 75 80
 Asn Leu Arg Val Arg Ala Thr Leu Gly Ser Gln Thr Ser Ala Trp Ser
 85 90 95
 Ile Leu Lys His Pro Phe Asn Arg Asn Ser Thr Ile Leu Thr Arg Pro
 100 105 110
 Gly Met Glu Ile Thr Lys Asp Gly Phe His Leu Val Ile Glu Leu Glu
 115 120 125
 Asp Leu Gly Pro Gln Phe Glu Phe Leu Val Ala Tyr Trp Arg Arg Glu
 130 135 140

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<213> Homo sapiens

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gcgaattcga gtctaccaaa tgcagacttt cac 33

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cgctcgagcc ttccgcaaac ctatgagatc ca 32

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gagtctacca a atg cag act ttc aca atg gtt cta gaa gaa atc tgg aca 170
          Met Gln Thr Phe Thr Met Val Leu Glu Glu Ile Trp Thr
              1              5              10

agt ctt ttc atg tgg ttt ttc tac gca ttg att cca tgt ttg ctc aca 218

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Ser	Leu	Phe	Met	Trp	Phe	Phe	Tyr	Ala	Leu	Ile	Pro	Cys	Leu	Leu	Thr	
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gat	gaa	gtg	gcc	att	ctg	cct	gcc	cct	cag	aac	ctc	tct	gta	ctc	tca	266
Asp	Glu	Val	Ala	Ile	Leu	Pro	Ala	Pro	Gln	Asn	Leu	Ser	Val	Leu	Ser	
30					35					40					45	
acc	aac	atg	aag	cat	ctc	ttg	atg	tgg	agc	cca	gtg	atc	gcg	cct	gga	314
Thr	Asn	Met	Lys	His	Leu	Leu	Met	Trp	Ser	Pro	Val	Ile	Ala	Pro	Gly	
				50					55					60		
gaa	aca	gtg	tac	tat	tct	gtc	gaa	tac	cag	ggg	gag	tac	gag	agc	ctg	362
Glu	Thr	Val	Tyr	Tyr	Ser	Val	Glu	Tyr	Gln	Gly	Glu	Tyr	Glu	Ser	Leu	
			65					70					75			
tac	acg	agc	cac	atc	tgg	atc	ccc	agc	agc	tgg	tgc	tca	ctc	act	gaa	410
Tyr	Thr	Ser	His	Ile	Trp	Ile	Pro	Ser	Ser	Trp	Cys	Ser	Leu	Thr	Glu	
		80					85					90				
ggt	cct	gag	tgt	gat	gtc	act	gat	gac	atc	acg	gcc	act	gtg	cca	tac	458
Gly	Pro	Glu	Cys	Asp	Val	Thr	Asp	Asp	Ile	Thr	Ala	Thr	Val	Pro	Tyr	
	95					100					105					
aac	ctt	cgt	gtc	agg	gcc	aca	ttg	ggc	tca	cag	acc	tca	gcc	tgg	agc	506
Asn	Leu	Arg	Val	Arg	Ala	Thr	Leu	Gly	Ser ²	Gln	Thr	Ser	Ala	Trp	Ser	
110					115					120					125	
atc	ctg	aag	cat	ccc	ttt	aat	aga	aac	tca	acc	atc	ctt	acc	cga	cct	554
Ile	Leu	Lys	His	Pro	Phe	Asn	Arg	Asn	Ser	Thr	Ile	Leu	Thr	Arg	Pro	
				130					135					140		
ggg	atg	gag	atc	ccc	aaa	cat	ggc	ttc	cac	ctg	gtt	att	gag	ctg	gag	602
Gly	Met	Glu	Ile	Pro	Lys	His	Gly	Phe	His	Leu	Val	Ile	Glu	Leu	Glu	
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gac	ctg	ggg	ccc	cag	ttt	gag	ttc	ctt	gtg	gcc	tac	tgg	acg	agg	gag	650
Asp	Leu	Gly	Pro	Gln	Phe	Glu	Phe	Leu	Val	Ala	Tyr	Trp	Thr	Arg	Glu	
		160					165					170				
cct	ggt	gcc	gag	gaa	cat	gtc	aaa	atg	gtg	agg	agt	ggg	ggt	att	cca	698
Pro	Gly	Ala	Glu	Glu	His	Val	Lys	Met	Val	Arg	Ser	Gly	Gly	Ile	Pro	
	175					180					185					

Met Gln Thr Phe Thr Met Val Leu Glu Glu Ile Trp Thr Ser Leu Phe
1 5 10 15

Met Trp Phe Phe Tyr Ala Leu Ile Pro Cys Leu Leu Thr Asp Glu Val
 20 25 30
 Ala Ile Leu Pro Ala Pro Gln Asn Leu Ser Val Leu Ser Thr Asn Met
 35 40 45
 Lys His Leu Leu Met Trp Ser Pro Val Ile Ala Pro Gly Glu Thr Val
 50 55 60
 Tyr Tyr Ser Val Glu Tyr Gln Gly Glu Tyr Glu Ser Leu Tyr Thr Ser
 65 70 75 80
 His Ile Trp Ile Pro Ser Ser Trp Cys Ser Leu Thr Glu Gly Pro Glu
 85 90 95
 Cys Asp Val Thr Asp Asp Ile Thr Ala Thr Val Pro Tyr Asn Leu Arg
 100 105 110
 Val Arg Ala Thr Leu Gly Ser Gln Thr Ser Ala Trp Ser Ile Leu Lys
 115 120 125
 His Pro Phe Asn Arg Asn Ser Thr Ile Leu Thr Arg Pro Gly Met Glu
 130 135 140
 Ile Pro Lys His Gly Phe His Leu Val Ile Glu Leu Glu Asp Leu Gly
 145 150 155 160
 Pro Gln Phe Glu Phe Leu Val Ala Tyr Trp Thr Arg Glu Pro Gly Ala
 165 170 175
 Glu Glu His Val Lys Met Val Arg Ser Gly Gly Ile Pro Val His Leu
 180 185 190
 Glu Thr Met Glu Pro Gly Ala Ala Tyr Cys Val Lys Ala Gln Thr Phe
 195 200 205
 Val Lys Ala Ile Gly Arg Tyr Ser Ala Phe Ser Gln Thr Glu Cys Val
 210 215 220
 Glu Val Gln Gly Glu Ala Ile Pro Leu Val Leu Ala Leu Phe Ala Phe
 225 230 235 240
 Val Gly Phe Met Leu Ile Leu Val Val Val Pro Leu Phe Val Trp Lys
 245 250 255
 Met Gly Arg Leu Leu Gln Tyr Ser Cys Cys Pro Val Val Val Leu Pro
 260 265 270
 Asp Thr Leu Lys Ile Thr Asn Ser Pro Gln Val Asn Gln Leu Gln Lys
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 Gly Gly Gly Gly Cys Leu Cys His Gly Cys Asp Val Ser
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<212> DNA

<213> Homo sapiens

<220>

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ctt	ttc	atg	tgg	ttt	ttc	tac	gca	ttg	att	cca	tgt	ttg	ctc	aca	gat	98
Leu	Phe	Met	Trp	Phe	Phe	Tyr	Ala	Leu	Ile	Pro	Cys	Leu	Leu	Thr	Asp	
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gaa	gtg	gcc	att	ctg	cct	gcc	cct	cag	aac	ctc	tct	gta	ctc	tca	acc	146
Glu	Val	Ala	Ile	Leu	Pro	Ala	Pro	Gln	Asn	Leu	Ser	Val	Leu	Ser	Thr	
				35				40						45		

aac	atg	aag	cat	ctc	ttg	atg	tgg	agc	cca	gtg	atc	gcg	cct	gga	gaa	194
Asn	Met	Lys	His	Leu	Leu	Met	Trp	Ser	Pro	Val	Ile	Ala	Pro	Gly	Glu	
			50					55						60		

aca	gtg	tac	tat	tct	gtc	gaa	tac	cag	ggg	gag	tac	gag	agc	ctg	tac	242
Thr	Val	Tyr	Tyr	Ser	Val	Glu	Tyr	Gln	Gly	Glu	Tyr	Glu	Ser	Leu	Tyr	
		65				70						75				

acg	agc	cac	atc	tgg	atc	ccc	agc	agc	tgg	tgc	tca	ctc	act	gaa	ggc	290
Thr	Ser	His	Ile	Trp	Ile	Pro	Ser	Ser	Trp	Cys	Ser	Leu	Thr	Glu	Gly	
	80					85					90					

cct	gag	tgt	gat	gtc	act	gat	gac	atc	acg	gcc	act	gtg	cca	tac	aac	338
Pro	Glu	Cys	Asp	Val	Thr	Asp	Asp	Ile	Thr	Ala	Thr	Val	Pro	Tyr	Asn	
	95				100					105					110	

ctt	cgt	gtc	agg	gcc	aca	ttg	ggc	tca	cag	acc	tca	gcc	tgg	agc	atc	386
Leu	Arg	Val	Arg	Ala	Thr	Leu	Gly	Ser	Gln	Thr	Ser	Ala	Trp	Ser	Ile	
				115					120					125		

ctg	aag	cat	ccc	ttt	aat	aga	aac	tca	acc	atc	ctt	acc	cga	cct	ggg	434
Leu	Lys	His	Pro	Phe	Asn	Arg	Asn	Ser	Thr	Ile	Leu	Thr	Arg	Pro	Gly	
			130					135					140			

atg	gag	atc	ccc	aaa	cat	ggc	ttc	cac	ctg	gtt	att	gag	ctg	gag	gac	482
Met	Glu	Ile	Pro	Lys	His	Gly	Phe	His	Leu	Val	Ile	Glu	Leu	Glu	Asp	
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ggt gcc gag gaa cat gtc aaa atg gtg agg agt ggg ggt att cca gtg	578
Gly Ala Glu Glu His Val Lys Met Val Arg Ser Gly Gly Ile Pro Val	
175 180 185 190	
cac cta gaa acc atg gag cca ggg gct gca tac tgt gtg aag gcc cag	626
His Leu Glu Thr Met Glu Pro Gly Ala Ala Tyr Cys Val Lys Ala Gln	
195 200 205	
aca ttc gtg aag gcc att ggg agg tac agc gcc ttc agc cag aca gaa	674
Thr Phe Val Lys Ala Ile Gly Arg Tyr Ser Ala Phe Ser Gln Thr Glu	
210 215 220	
tgt gtg gag gtg caa gga gag gcc gga ggt ggt ggc agt gga ggc ggc	722
Cys Val Glu Val Gln Gly Glu Ala Gly Gly Gly Gly Ser Gly Gly Gly	
225 230 235	
ggt agc gga ggc ggt ggc agt cga act gtg gct gca cca tct gtc ttc	770
Gly Ser Gly Gly Gly Gly Ser Arg Thr Val Ala Ala Pro Ser Val Phe	
240 245 250	
atc ttc ccg cca tct gat gag cag ttg aaa tct gga act gcc tct gtt	818
Ile Phe Pro Pro Ser Asp Glu Gln Leu Lys Ser Gly Thr Ala Ser Val	
255 260 265 270	
gtg tgc ctg ctg aat aac ttc tat ccc aga gag gcc aaa gta cag tgg	866
Val Cys Leu Leu Asn Asn Phe Tyr Pro Arg Glu Ala Lys Val Gln Trp	
275 280 285	
aag gtg gat aac gcc ctc caa tcg ggt aac tcc cag gag agt gtc aca	914
Lys Val Asp Asn Ala Leu Gln Ser Gly Asn Ser Gln Glu Ser Val Thr	
290 295 300	
gag cag gac agc aag gac agc acc tac agc ctc agc agc acc ctg acg	962
Glu Gln Asp Ser Lys Asp Ser Thr Tyr Ser Leu Ser Ser Thr Leu Thr	
305 310 315	
ctg agc aaa gca gac tac gag aaa cac aaa gtc tac gcc tgc gaa gtc	1010

Leu Ser Lys Ala Asp Tyr Glu Lys His Lys Val Tyr Ala Cys Glu Val
 320 325 330

acc cat cag ggc ctg agc tcg ccc gtc aca aag agc ttc aac agg gga 1058
 Thr His Gln Gly Leu Ser Ser Pro Val Thr Lys Ser Phe Asn Arg Gly
 335 340 345 350

gag tgt taa tctagaggcg cgcc 1081
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<210> 21

<211> 352

<212> PRT

<213> Homo sapiens

<400> 21

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 20 25 30
 Ala Ile Leu Pro Ala Pro Gln Asn Leu Ser Val Leu Ser Thr Asn Met
 35 40 45
 Lys His Leu Leu Met Trp Ser Pro Val Ile Ala Pro Gly Glu Thr Val
 50 55 60
 Tyr Tyr Ser Val Glu Tyr Gln Gly Glu Tyr Glu Ser Leu Tyr Thr Ser
 65 70 75 80
 His Ile Trp Ile Pro Ser Ser Trp Cys Ser Leu Thr Glu Gly Pro Glu
 85 90 95
 Cys Asp Val Thr Asp Asp Ile Thr Ala Thr Val Pro Tyr Asn Leu Arg
 100 105 110
 Val Arg Ala Thr Leu Gly Ser Gln Thr Ser Ala Trp Ser Ile Leu Lys
 115 120 125
 His Pro Phe Asn Arg Asn Ser Thr Ile Leu Thr Arg Pro Gly Met Glu
 130 135 140
 Ile Pro Lys His Gly Phe His Leu Val Ile Glu Leu Glu Asp Leu Gly
 145 150 155 160
 Pro Gln Phe Glu Phe Leu Val Ala Tyr Trp Thr Arg Glu Pro Gly Ala
 165 170 175
 Glu Glu His Val Lys Met Val Arg Ser Gly Gly Ile Pro Val His Leu
 180 185 190
 Glu Thr Met Glu Pro Gly Ala Ala Tyr Cys Val Lys Ala Gln Thr Phe
 195 200 205

Val Lys Ala Ile Gly Arg Tyr Ser Ala Phe Ser Gln Thr Glu Cys Val
 210 215 220
 Glu Val Gln Gly Glu Ala Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser
 225 230 235 240
 Gly Gly Gly Gly Ser Arg Thr Val Ala Ala Pro Ser Val Phe Ile Phe
 245 250 255
 Pro Pro Ser Asp Glu Gln Leu Lys Ser Gly Thr Ala Ser Val Val Cys
 260 265 270
 Leu Leu Asn Asn Phe Tyr Pro Arg Glu Ala Lys Val Gln Trp Lys Val
 275 280 285
 Asp Asn Ala Leu Gln Ser Gly Asn Ser Gln Glu Ser Val Thr Glu Gln
 290 295 300
 Asp Ser Lys Asp Ser Thr Tyr Ser Leu Ser Ser Thr Leu Thr Leu Ser
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 Lys Ala Asp Tyr Glu Lys His Lys Val Tyr Ala Cys Glu Val Thr His
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<222> (8)...(1789)

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Cys Gly Ala Val Phe Val Ser Leu Ser Gln Glu Ile His Ala Glu Leu

15

20

25

30

aga cgc ttc cgt aga gtt ccc tgt gtc tct ggt ggt ttg cct aaa cct 145

Arg Arg Phe Arg Arg Val Pro Cys Val Ser Gly Gly Leu Pro Lys Pro

35

40

45

gca aac atc acc ttc tta tcc atc aac atg aag aat gtc cta caa tgg 193

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			50					55					60			
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Thr	Pro	Pro	Glu	Gly	Leu	Gln	Gly	Val	Lys	Val	Thr	Tyr	Thr	Val	Gln	
		65					70					75				
tat	ttc	ata	tat	ggg	caa	aag	aaa	tgg	ctg	aat	aaa	tca	gaa	tgc	aga	289
Tyr	Phe	Ile	Tyr	Gly	Gln	Lys	Lys	Trp	Leu	Asn	Lys	Ser	Glu	Cys	Arg	
	80					85					90					
aat	atc	aat	aga	acc	tac	tgt	gat	ctt	tct	gct	gaa	act	tct	gac	tac	337
Asn	Ile	Asn	Arg	Thr	Tyr	Cys	Asp	Leu	Ser	Ala	Glu	Thr	Ser	Asp	Tyr	
95					100					105					110	
gaa	cac	cag	tat	tat	gcc	aaa	gtt	aag	gcc	att	tgg	gga	aca	aag	tgt	385
Glu	His	Gln	Tyr	Tyr	Ala	Lys	Val	Lys	Ala	Ile	Trp	Gly	Thr	Lys	Cys	
				115					120					125		
tcc	aaa	tgg	gct	gaa	agt	gga	cgg	ttc	tat	cct	ttt	tta	gaa	aca	caa	433
Ser	Lys	Trp	Ala	Glu	Ser	Gly	Arg	Phe	Tyr	Pro	Phe	Leu	Glu	Thr	Gln	
			130					135					140			
att	ggc	cca	cca	gag	gtg	gca	ctg	act	aca	gat	gag	aag	tcc	att	tct	481
Ile	Gly	Pro	Pro	Glu	Val	Ala	Leu	Thr	Thr	Asp	Glu	Lys	Ser	Ile	Ser	
		145					150					155				
gtt	gtc	ctg	aca	gct	cca	gag	aag	tgg	aag	aga	aat	cca	gaa	gac	ctt	529
Val	Val	Leu	Thr	Ala	Pro	Glu	Lys	Trp	Lys	Arg	Asn	Pro	Glu	Asp	Leu	
	160					165					170					
cct	gtt	tcc	atg	caa	caa	ata	tac	tcc	aat	ctg	aag	tat	aac	gtg	tct	577
Pro	Val	Ser	Met	Gln	Gln	Ile	Tyr	Ser	Asn	Leu	Lys	Tyr	Asn	Val	Ser	
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Val	Leu	Asn	Thr	Lys	Ser	Asn	Arg	Thr	Trp	Ser	Gln	Cys	Val	Thr	Asn	
				195					200					205		
cac	acg	ctg	gtg	ctc	acc	tgg	ctg	gag	ccg	aac	act	ctt	tac	tgc	gta	673
His	Thr	Leu	Val	Leu	Thr	Trp	Leu	Glu	Pro	Asn	Thr	Leu	Tyr	Cys	Val	
			210					215					220			

ggg gca ccg tca gtc ttc ctc ttc ccc cca aaa ccc aag gac acc ctc 1201
Gly Ala Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu
385 390 395

atg atc tcc cgg acc cct gag gtc aca tgc gtg gtg gtg gac gtg agc	1249
Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser	
400 405 410	
cac gaa gac cct gag gtc aag ttc aac tgg tac gtg gac ggc gtg gag	1297
His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu	
415 420 425 430	
gtg cat aat gcc aag aca aag ccg cgg gag gag cag tac aac agc acg	1345
Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr	
435 440 445	
tac cgt gtg gtc agc gtc ctc acc gtc ctg cac cag gac tgg ctg aat	1393
Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn	
450 455 460	
ggc aag gag tac aag tgc aag gtc tcc aac aaa gcc ctc cca tcc tcc	1441
Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ser Ser	
465 470 475	
atc gag aaa acc atc tcc aaa gcc aaa ggg cag ccc cga gaa cca cag	1489
Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln	
480 485 490	
gtg tac acc ctg ccc cca tcc cgg gat gag ctg acc aag aac cag gtc	1537
Val Tyr Thr Leu Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn Gln Val	
495 500 505 510	
agc ctg acc tgc ctg gtc aaa ggc ttc tat ccc agc gac atc gcc gtg	1585
Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val	
515 520 525	
gag tgg gag agc aat ggg cag ccg gag aac aac tac aag acc acg cct	1633
Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro	
530 535 540	
ccc gtg ctg gac tcc gac ggc tcc ttc ttc ctc tac agc aag ctc acc	1681
Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr	
545 550 555	
gtg gac aag agc agg tgg cag cag ggg aac gtc ttc tca tgc tcc gtg	1729

atg cat gag gct ctg cac aac cac tac acg cag aag agc ctc tcc ctg 1777
Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu
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<211> 594
<212> PRT
<213> Homo sapiens
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<400> 23																
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Ala	Val	Phe	Val	Ser	Leu	Ser	Gln	Glu	Ile	His	Ala	Glu	Leu	Arg	Arg	
20						25						30				
Phe	Arg	Arg	Val	Pro	Cys	Val	Ser	Gly	Gly	Leu	Pro	Lys	Pro	Ala	Asn	
35						40						45				
Ile	Thr	Phe	Leu	Ser	Ile	Asn	Met	Lys	Asn	Val	Leu	Gln	Trp	Thr	Pro	
50						55						60				
Pro	Glu	Gly	Leu	Gln	Gly	Val	Lys	Val	Thr	Tyr	Thr	Val	Gln	Tyr	Phe	
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Asn	Arg	Thr	Tyr	Cys	Asp	Leu	Ser	Ala	Glu	Thr	Ser	Asp	Tyr	Glu	His	
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Gln	Tyr	Tyr	Ala	Lys	Val	Lys	Ala	Ile	Trp	Gly	Thr	Lys	Cys	Ser	Lys	
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 Pro Ala Pro Gly His Pro Asp Pro Pro Pro Leu Leu Leu Leu Thr Leu
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ctt ctg ctg ctg gcc gct tcg gga cgc gca gtt cct tgt gtc ttc tgt 151
 Leu Leu Leu Leu Ala Ala Ser Gly Arg Ala Val Pro Cys Val Phe Cys
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ggt ttg cct aaa cct aca aat atc acc ttc tta tcc atc aac atg aag 199
 Gly Leu Pro Lys Pro Thr Asn Ile Thr Phe Leu Ser Ile Asn Met Lys
 40 45 50

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Gln	Cys	Val	Thr	Asn	Ser	Thr	Leu	Val	Leu	Ser	Trp	Leu	Glu	Pro	Asn	
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Leu	Pro	Met	Pro	Ser	Gln	Lys	Gln	Cys	Ile	Ser	Thr	Leu	Glu	Val	Gln	
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Thr	Ser	Ala	Trp	Lys	Ala	Lys	Val	Ile	Phe	Trp	Tyr	Val	Phe	Leu	Thr	
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Ser	Val	Ile	Val	Phe	Leu	Phe	Ser	Ala	Ile	Gly	Tyr	Leu	Val	Tyr	Arg	
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Tyr	Ile	His	Val	Gly	Lys	Glu	Lys	His	Pro	Ala	Asn	Leu	Val	Leu	Ile	
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Tyr	Arg	Asn	Glu	Ile	Gly	Thr	Arg	Val	Phe	Glu	Pro	Thr	Glu	Thr	Ile	
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Thr	Leu	Asn	Phe	Ile	Thr	Phe	Ser	Met	Leu	Asp	Asp	Thr	Lys	Ile	Ser	
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Pro	Lys	Asp	Met	Asn	Leu	Leu	Asp	Lys	Ser	Ser	Asp	Asp	Ile	Ser	Val	
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Glu	Gly	Gln	His	Leu	Gly	Cys	Ser	Ser	His	Leu	Met	Asp	Ala	Val	Cys	
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ggt	gct	gag	caa	aga	gac	gga	gac	acc	tcc	cta	acc	cag	cat	ggg	tgg	1207
Gly	Ala	Glu	Gln	Arg	Asp	Gly	Asp	Thr	Ser	Leu	Thr	Gln	His	Gly	Trp	
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 Leu Asn Ser Thr Ile Pro Thr Gly Glu Thr Asp Thr Glu Pro Gln Tyr
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aaa gtc cta agt gac ttc tac ggg gag ggt gaa atc caa ctg tcc tgt 1303
 Lys Val Leu Ser Asp Phe Tyr Gly Glu Gly Glu Ile Gln Leu Ser Cys
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gag ccg gaa gag gcg gcc aga aca gag aaa ata tct gag cca ctg gtg 1351
 Glu Pro Glu Glu Ala Ala Arg Thr Glu Lys Ile Ser Glu Pro Leu Val
 425 430 435

act tca gca aac ttg gac cca cag ctt gaa gac cta cat cac ctg ggt 1399
 Thr Ser Ala Asn Leu Asp Pro Gln Leu Glu Asp Leu His His Leu Gly
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cag gag cat act gtc tcc gag gat ggg cca gag gaa gag aca tct ata 1447
 Gln Glu His Thr Val Ser Glu Asp Gly Pro Glu Glu Glu Thr Ser Ile
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 Thr Val Val Asp Trp Asp Pro Gln Thr Gly Arg Leu Cys Ile Pro Ser
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 Leu Pro Ile Phe Gly Arg Asp Pro Glu Asn Tyr Gly His Tyr Glu Arg
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 Asp Gln Leu Leu Glu Gly Gly Leu Leu Ser Arg Leu Tyr Glu Asn Gln
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 Ala Pro Asp Lys Pro Glu Lys Glu Asn Glu Asn Cys Leu Thr Arg Phe
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 Met Glu Glu Trp Gly Leu His Val Gln Met Glu Ser
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Val	Pro	Cys	Val	Phe	Cys	Gly	Leu	Pro	Lys	Pro	Thr	Asn	Ile	Thr	Phe
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Leu	Ser	Ile	Asn	Met	Lys	Asn	Val	Leu	His	Trp	Asn	Pro	Pro	Glu	Ser
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Leu	His	Gly	Val	Glu	Val	Thr	Tyr	Thr	Val	Gln	Tyr	Phe	Ile	Tyr	Gly
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Gln	Lys	Lys	Trp	Leu	Asn	Ala	Ser	Lys	Cys	Gly	Ser	Ile	Asn	Arg	Thr
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Ile	Ala	Leu	Thr	Thr	Gly	Glu	Lys	Ser	Ile	Ser	Ile	Ala	Leu	Thr	Ala
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Pro	Glu	Lys	Trp	Lys	Arg	Asn	Pro	Gln	Asp	His	Thr	Val	Ser	Met	Gln
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Gln	Ile	Tyr	Pro	Asn	Leu	Lys	Tyr	Asn	Val	Ser	Val	Tyr	Asn	Thr	Lys
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Val	Pro	Gly	Pro	Pro	Arg	Leu	Pro	Met	Pro	Ser	Gln	Lys	Gln	Cys	Ile
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Ser	Thr	Leu	Glu	Val	Gln	Thr	Ser	Ala	Trp	Lys	Ala	Lys	Val	Ile	Phe
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Trp	Tyr	Val	Phe	Leu	Thr	Ser	Val	Ile	Val	Phe	Leu	Phe	Ser	Ala	Ile
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Gly	Tyr	Leu	Val	Tyr	Arg	Tyr	Ile	His	Val	Gly	Lys	Glu	Lys	His	Pro
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Ala Asn Leu Val Leu Ile Tyr Arg Asn Glu Ile Gly Thr Arg Val Phe
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 Glu Pro Thr Glu Thr Ile Thr Leu Asn Phe Ile Thr Phe Ser Met Leu
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 Asp Asp Thr Lys Ile Ser Pro Lys Asp Met Asn Leu Leu Asp Lys Ser
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 Trp Tyr Val Phe Leu Thr Ser Val Ile Val Phe Leu Phe Ser Ala Ile
 225 230 235 240
 Gly Tyr Leu Val Tyr Arg Tyr Ile His Val Gly Lys Glu Lys His Pro
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 Ala Asn Leu Val Leu Ile Tyr Arg Asn Glu Ile Gly Thr Arg Val Phe
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 Glu Pro Thr Glu Thr Ile Thr Leu Asn Phe Ile Thr Phe Ser Met Leu
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 Asp Thr Glu Pro Gln Tyr Lys Val Leu Ser Asp Phe Tyr Gly Glu Gly
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Glu	Ala	Ser	Thr	Lys	Gly	Pro	Ser	Val	Phe	Pro	Leu	Ala	Pro	Ser	Ser	
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aag	agc	acc	tct	ggg	ggc	aca	gcg	gcc	ctg	ggc	tgc	ctg	gtc	aag	gac	816
Lys	Ser	Thr	Ser	Gly	Gly	Thr	Ala	Ala	Leu	Gly	Cys	Leu	Val	Lys	Asp	
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Tyr	Phe	Pro	Glu	Pro	Val	Thr	Val	Ser	Trp	Asn	Ser	Gly	Ala	Leu	Thr	
		275						280				285				
agc	ggc	gtg	cac	acc	ttc	ccg	gct	gtc	cta	cag	tcc	tca	gga	ctc	tac	912
Ser	Gly	Val	His	Thr	Phe	Pro	Ala	Val	Leu	Gln	Ser	Ser	Gly	Leu	Tyr	
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Ser	Leu	Ser	Ser	Val	Val	Thr	Val	Pro	Ser	Ser	Ser	Leu	Gly	Thr	Gln	
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acc	tac	atc	tgc	aac	gtg	aat	cac	aag	ccc	agc	aac	acc	aag	gtg	gac	1008
Thr	Tyr	Ile	Cys	Asn	Val	Asn	His	Lys	Pro	Ser	Asn	Thr	Lys	Val	Asp	
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Lys	Lys	Val	Glu	Pro	Lys	Ser	Cys	Asp	Lys	Thr	His	Thr	Cys	Pro	Pro	
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Cys	Pro	Ala	Pro	Glu	Leu	Leu	Gly	Gly	Pro	Ser	Val	Phe	Leu	Phe	Pro	
		355				360						365				
cca	aaa	ccc	aag	gac	acc	ctc	atg	atc	tcc	cgg	acc	cct	gag	gtc	aca	1152

Pro	Lys	Pro	Lys	Asp	Thr	Leu	Met	Ile	Ser	Arg	Thr	Pro	Glu	Val	Thr	
370						375					380					
tgc	gtg	gtg	gtg	gac	gtg	agc	cac	gaa	gac	cct	gag	gtc	aag	ttc	aac	1200
Cys	Val	Val	Val	Asp	Val	Ser	His	Glu	Asp	Pro	Glu	Val	Lys	Phe	Asn	
385					390					395					400	
tgg	tac	gtg	gac	ggc	gtg	gag	gtg	cat	aat	gcc	aag	aca	aag	ccg	cgg	1248
Trp	Tyr	Val	Asp	Gly	Val	Glu	Val	His	Asn	Ala	Lys	Thr	Lys	Pro	Arg	
				405					410					415		
gag	gag	cag	tac	aac	agc	acg	tac	cgt	gtg	gtc	agc	gtc	ctc	acc	gtc	1296
Glu	Glu	Gln	Tyr	Asn	Ser	Thr	Tyr	Arg	Val	Val	Ser	Val	Leu	Thr	Val	
			420					425					430			
ctg	cac	cag	gac	tgg	ctg	aat	ggc	aag	gag	tac	aag	tgc	aag	gtc	tcc	1344
Leu	His	Gln	Asp	Trp	Leu	Asn	Gly	Lys	Glu	Tyr	Lys	Cys	Lys	Val	Ser	
		435					440					445				
aac	aaa	gcc	ctc	cca	gcc	ccc	atc	gag	aaa	acc	atc	tcc	aaa	gcc	aaa	1392
Asn	Lys	Ala	Leu	Pro	Ala	Pro	Ile	Glu	Lys	Thr	Ile	Ser	Lys	Ala	Lys	
	450					455					460					
ggg	cag	ccc	cga	gaa	cca	cag	gtg	tac	acc	ctg	ccc	cca	tcc	cgg	gat	1440
Gly	Gln	Pro	Arg	Glu	Pro	Gln	Val	Tyr	Thr	Leu	Pro	Pro	Ser	Arg	Asp	
465					470					475					480	
gag	ctg	acc	aag	aac	cag	gtc	agc	ctg	acc	tgc	ctg	gtc	aaa	ggc	ttc	1488
Glu	Leu	Thr	Lys	Asn	Gln	Val	Ser	Leu	Thr	Cys	Leu	Val	Lys	Gly	Phe	
				485					490					495		
tat	ccc	agc	gac	atc	gcc	gtg	gag	tgg	gag	agc	aat	ggg	cag	ccg	gag	1536
Tyr	Pro	Ser	Asp	Ile	Ala	Val	Glu	Trp	Glu	Ser	Asn	Gly	Gln	Pro	Glu	
			500					505					510			
aac	aac	tac	aag	acc	acg	cct	ccc	gtg	ctg	gac	tcc	gac	ggc	tcc	ttc	1584
Asn	Asn	Tyr	Lys	Thr	Thr	Pro	Pro	Val	Leu	Asp	Ser	Asp	Gly	Ser	Phe	
		515					520					525				
ttc	ctc	tac	agc	aag	ctc	acc	gtg	gac	aag	agc	agg	tgg	cag	cag	ggg	1632
Phe	Leu	Tyr	Ser	Lys	Leu	Thr	Val	Asp	Lys	Ser	Arg	Trp	Gln	Gln	Gly	
	530						535				540					

aac gtc ttc tca tgc tcc gtg atg cat gag gct ctg cac aac cac tac 1680
 Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr
 545 550 555 560

acg cag aag agc ctc tcc ctg tct ccg ggt aaa tgacgcg 1720
 Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys
 565 570

<210> 53

<211> 571

<212> PRT

<213> Homo sapiens

<400> 53

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 1 5 10 15
 Leu Ala Ala Pro Trp Gly Arg Ala Val Pro Cys Val Ser Gly Gly Leu
 20 25 30
 Pro Lys Pro Ala Asn Ile Thr Phe Leu Ser Ile Asn Met Lys Asn Val
 35 40 45
 Leu Gln Trp Thr Pro Pro Glu Gly Leu Gln Gly Val Lys Val Thr Tyr
 50 55 60
 Thr Val Gln Tyr Phe Ile Tyr Gly Gln Lys Lys Trp Leu Asn Lys Ser
 65 70 75 80
 Glu Cys Arg Asn Ile Asn Arg Thr Tyr Cys Asp Leu Ser Ala Glu Thr
 85 90 95
 Ser Asp Tyr Glu His Gln Tyr Tyr Ala Lys Val Lys Ala Ile Trp Gly
 100 105 110
 Thr Lys Cys Ser Lys Trp Ala Glu Ser Gly Arg Phe Tyr Pro Phe Leu
 115 120 125
 Glu Thr Gln Ile Gly Pro Pro Glu Val Ala Leu Thr Thr Asp Glu Lys
 130 135 140
 Ser Ile Ser Val Val Leu Thr Ala Pro Glu Lys Trp Lys Arg Asn Pro
 145 150 155 160
 Glu Asp Leu Pro Val Ser Met Gln Gln Ile Tyr Ser Asn Leu Lys Tyr
 165 170 175
 Asn Val Ser Val Leu Asn Thr Lys Ser Asn Arg Thr Trp Ser Gln Cys
 180 185 190
 Val Thr Asn His Thr Leu Val Leu Thr Trp Leu Glu Pro Asn Thr Leu
 195 200 205
 Tyr Cys Val His Val Glu Ser Phe Val Pro Gly Pro Pro Arg Arg Ala
 210 215 220

Val Pro Cys Val Ser Gly Gly Leu Pro Lys Pro Ala Asn Ile Thr Phe
 1 5 10 15
 Leu Ser Ile Asn Met Lys Asn Val Leu Gln Trp Thr Pro Pro Glu Gly
 20 25 30
 Leu Gln Gly Val Lys Val Thr Tyr Thr Val Gln Tyr Phe Ile Tyr Gly
 35 40 45
 Gln Lys Lys Trp Leu Asn Lys Ser Glu Cys Arg Asn Ile Asn Arg Thr
 50 55 60
 Tyr Cys Asp Leu Ser Ala Glu Thr Ser Asp Tyr Glu His Gln Tyr Tyr
 65 70 75 80
 Ala Lys Val Lys Ala Ile Trp Gly Thr Lys Cys Ser Lys Trp Ala Glu
 85 90 95
 Ser Gly Arg Phe Tyr Pro Phe Leu Glu Thr Gln Ile Gly Pro Pro Glu
 100 105 110
 Val Ala Leu Thr Thr Asp Glu Lys Ser Ile Ser Val Val Leu Thr Ala
 115 120 125
 Pro Glu Lys Trp Lys Arg Asn Pro Glu Asp Leu Pro Val Ser Met Gln
 130 135 140
 Gln Ile Tyr Ser Asn Leu Lys Tyr Asn Val Ser Val Leu Asn Thr Lys
 145 150 155 160
 Ser Asn Arg Thr Trp Ser Gln Cys Val Thr Asn His Thr Leu Val Leu
 165 170 175
 Thr Trp Leu Glu Pro Asn Thr Leu Tyr Cys Val His Val Glu Ser Phe
 180 185 190
 Val Pro Gly Pro Pro Arg Arg Ala Gln Pro Ser Glu Lys Gln Cys Ala
 195 200 205
 Arg Thr Leu Lys Asp Gln Ser Ser Glu
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<210> 56

<211> 1011

<212> DNA

<213> Homo sapiens

<220>

<221> CDS

<222> (1)...(1008)

<400> 56

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 Met Gln Thr Phe Thr Met Val Leu Glu Glu Ile Trp Thr Ser Leu Phe
 1 5 10 15

48

atg	tgg	ttt	ttc	tac	gca	ttg	att	cca	tgt	ttg	ctc	aca	gat	gaa	gtg	96
Met	Trp	Phe	Phe	Tyr	Ala	Leu	Ile	Pro	Cys	Leu	Leu	Thr	Asp	Glu	Val	
			20					25					30			
gcc	att	ctg	cct	gcc	cct	cag	aac	ctc	tct	gta	ctc	tca	acc	aac	atg	144
Ala	Ile	Leu	Pro	Ala	Pro	Gln	Asn	Leu	Ser	Val	Leu	Ser	Thr	Asn	Met	
		35					40					45				
aag	cat	ctc	ttg	atg	tgg	agc	cca	gtg	atc	gcg	cct	gga	gaa	aca	gtg	192
Lys	His	Leu	Leu	Met	Trp	Ser	Pro	Val	Ile	Ala	Pro	Gly	Glu	Thr	Val	
	50					55					60					
tac	tat	tct	gtc	gaa	tac	cag	ggg	gag	tac	gag	agc	ctg	tac	acg	agc	240
Tyr	Tyr	Ser	Val	Glu	Tyr	Gln	Gly	Glu	Tyr	Glu	Ser	Leu	Tyr	Thr	Ser	
65					70					75					80	
cac	atc	tgg	atc	ccc	agc	agc	tgg	tgc	tca	ctc	act	gaa	ggt	cct	gag	288
His	Ile	Trp	Ile	Pro	Ser	Ser	Trp	Cys	Ser	Leu	Thr	Glu	Gly	Pro	Glu	
				85					90					95		
tgt	gat	gtc	act	gat	gac	atc	acg	gcc	act	gtg	cca	tac	aac	ctt	cgt	336
Cys	Asp	Val	Thr	Asp	Asp	Ile	Thr	Ala	Thr	Val	Pro	Tyr	Asn	Leu	Arg	
			100					105					110			
gtc	agg	gcc	aca	ttg	ggc	tca	cag	acc	tca	gcc	tgg	agc	atc	ctg	aag	384
Val	Arg	Ala	Thr	Leu	Gly	Ser	Gln	Thr	Ser	Ala	Trp	Ser	Ile	Leu	Lys	
		115					120					125				
cat	ccc	ttt	aat	aga	aac	tca	acc	atc	ctt	acc	cga	cct	ggg	atg	gag	432
His	Pro	Phe	Asn	Arg	Asn	Ser	Thr	Ile	Leu	Thr	Arg	Pro	Gly	Met	Glu	
	130					135					140					
atc	acc	aaa	gat	ggc	ttc	cac	ctg	gtt	att	gag	ctg	gag	gac	ctg	ggg	480
Ile	Thr	Lys	Asp	Gly	Phe	His	Leu	Val	Ile	Glu	Leu	Glu	Asp	Leu	Gly	
145					150					155					160	
ccc	cag	ttt	gag	ttc	ctt	gtg	gcc	tac	tgg	agg	agg	gag	cct	ggt	gcc	528
Pro	Gln	Phe	Glu	Phe	Leu	Val	Ala	Tyr	Trp	Arg	Arg	Glu	Pro	Gly	Ala	
				165					170					175		
gag	gaa	cat	gtc	aaa	atg	gtg	agg	agt	ggg	ggt	att	cca	gtg	cac	cta	576
Glu	Glu	His	Val	Lys	Met	Val	Arg	Ser	Gly	Gly	Ile	Pro	Val	His	Leu	
			180					185					190			

gaa acc atg gag cca ggg gct gca tac tgt gtg aag gcc cag aca ttc 624
 Glu Thr Met Glu Pro Gly Ala Ala Tyr Cys Val Lys Ala Gln Thr Phe
 195 200 205

 gtg aag gcc att ggg agg tac agc gcc ttc agc cag aca gaa tgt gtg 672
 Val Lys Ala Ile Gly Arg Tyr Ser Ala Phe Ser Gln Thr Glu Cys Val
 210 215 220

 gag gtg caa gga gag gcc act gtg gct gca cca tct gtc ttc atc ttc 720
 Glu Val Gln Gly Glu Ala Thr Val Ala Ala Pro Ser Val Phe Ile Phe
 225 230 235 240

 ccg cca tct gat gag cag ttg aaa tct ggt acc gcc tct gtt gtg tgc 768
 Pro Pro Ser Asp Glu Gln Leu Lys Ser Gly Thr Ala Ser Val Val Cys
 245 250 255

 ctg ctg aat aac ttc tat ccc aga gag gcc aaa gta cag tgg aag gtg 816
 Leu Leu Asn Asn Phe Tyr Pro Arg Glu Ala Lys Val Gln Trp Lys Val
 260 265 270

 gat aac gcc ctc caa tcg ggt aac tcc cag gag agt gtc aca gag cag 864
 Asp Asn Ala Leu Gln Ser Gly Asn Ser Gln Glu Ser Val Thr Glu Gln
 275 280 285

 gac agc aag gac agc acc tac agc ctc agc agc acc ctg acg ctg agc 912
 Asp Ser Lys Asp Ser Thr Tyr Ser Leu Ser Ser Thr Leu Thr Leu Ser
 290 295 300

 aaa gca gac tac gag aaa cac aaa gtc tac gcc tgc gaa gtc acc cat 960
 Lys Ala Asp Tyr Glu Lys His Lys Val Tyr Ala Cys Glu Val Thr His
 305 310 315 320

 cag ggc ctg agc tcg ccc gtc aca aag agc ttc aac agg gga gag tgt 1008
 Gln Gly Leu Ser Ser Pro Val Thr Lys Ser Phe Asn Arg Gly Glu Cys
 325 330 335

 tag 1011

<210> 57

<211> 336

<212> PRT

<213> Homo sapiens

[illegible]

Met 1	Gln	Thr	Phe	Thr 5	Met	Val	Leu	Glu	Glu 10	Ile	Trp	Thr	Ser	Leu 15	Phe
Met	Trp	Phe	Phe	Tyr	Ala	Leu	Ile	Pro	Cys	Leu	Leu	Thr	Asp	Glu	Val
			20					25					30		
Ala	Ile	Leu	Pro	Ala	Pro	Gln	Asn	Leu	Ser	Val	Leu	Ser	Thr	Asn	Met
		35					40					45			
Lys	His	Leu	Leu	Met	Trp	Ser	Pro	Val	Ile	Ala	Pro	Gly	Glu	Thr	Val
	50					55				60					
Tyr	Tyr	Ser	Val	Glu	Tyr	Gln	Gly	Glu	Tyr	Glu	Ser	Leu	Tyr	Thr	Ser
65				70						75					80
His	Ile	Trp	Ile	Pro	Ser	Ser	Trp	Cys	Ser	Leu	Thr	Glu	Gly	Pro	Glu
				85				90						95	
Cys	Asp	Val	Thr	Asp	Asp	Ile	Thr	Ala	Thr	Val	Pro	Tyr	Asn	Leu	Arg
			100					105					110		
Val	Arg	Ala	Thr	Leu	Gly	Ser	Gln	Thr	Ser	Ala	Trp	Ser	Ile	Leu	Lys
		115					120					125			
His	Pro	Phe	Asn	Arg	Asn	Ser	Thr	Ile	Leu	Thr	Arg	Pro	Gly	Met	Glu
	130					135					140				
Ile	Thr	Lys	Asp	Gly	Phe	His	Leu	Val	Ile	Glu	Leu	Glu	Asp	Leu	Gly
145				150						155				160	
Pro	Gln	Phe	Glu	Phe	Leu	Val	Ala	Tyr	Trp	Arg	Arg	Glu	Pro	Gly	Ala
				165					170					175	
Glu	Glu	His	Val	Lys	Met	Val	Arg	Ser	Gly	Gly	Ile	Pro	Val	His	Leu
			180					185					190		
Glu	Thr	Met	Glu	Pro	Gly	Ala	Ala	Tyr	Cys	Val	Lys	Ala	Gln	Thr	Phe
		195					200					205			
Val	Lys	Ala	Ile	Gly	Arg	Tyr	Ser	Ala	Phe	Ser	Gln	Thr	Glu	Cys	Val
	210					215					220				
Glu	Val	Gln	Gly	Glu	Ala	Thr	Val	Ala	Ala	Pro	Ser	Val	Phe	Ile	Phe
225				230						235				240	
Pro	Pro	Ser	Asp	Glu	Gln	Leu	Lys	Ser	Gly	Thr	Ala	Ser	Val	Val	Cys
				245					250					255	
Leu	Leu	Asn	Asn	Phe	Tyr	Pro	Arg	Glu	Ala	Lys	Val	Gln	Trp	Lys	Val
			260					265					270		
Asp	Asn	Ala	Leu	Gln	Ser	Gly	Asn	Ser	Gln	Glu	Ser	Val	Thr	Glu	Gln
		275					280						285		
Asp	Ser	Lys	Asp	Ser	Thr	Tyr	Ser	Leu	Ser	Ser	Thr	Leu	Thr	Leu	Ser
	290					295					300				
Lys	Ala	Asp	Tyr	Glu	Lys	His	Lys	Val	Tyr	Ala	Cys	Glu	Val	Thr	His
305					310					315					320

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<210> 58
<211> 307
<212> PRT
<213> Homo sapiens
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Asp 1	Glu	Val	Ala	Ile 5	Leu	Pro	Ala	Pro	Gln 10	Asn	Leu	Ser	Val	Leu 15	Ser
Thr	Asn	Met	Lys 20	His	Leu	Leu	Met	Trp	Ser 25	Pro	Val	Ile	Ala 30	Pro	Gly
Glu	Thr	Val	Tyr 35	Tyr	Ser	Val	Glu 40	Tyr	Gln	Gly	Glu	Tyr 45	Glu	Ser	Leu
Tyr	Thr	Ser	His	Ile	Trp	Ile 55	Pro	Ser	Ser	Trp	Cys 60	Ser	Leu	Thr	Glu
Gly 65	Pro	Glu	Cys	Asp 70	Val	Thr	Asp	Asp	Ile	Thr	Ala	Thr	Val	Pro	Tyr 80
Asn	Leu	Arg	Val 85	Arg	Ala	Thr	Leu	Gly	Ser 90	Gln	Thr	Ser	Ala	Trp 95	Ser
Ile	Leu	Lys	His 100	Pro	Phe	Asn	Arg	Asn 105	Ser	Thr	Ile	Leu	Thr 110	Arg	Pro
Gly	Met	Glu	Ile 115	Thr	Lys	Asp	Gly 120	Phe	His	Leu	Val	Ile 125	Glu	Leu	Glu
Asp 130	Leu	Gly	Pro	Gln	Phe	Glu 135	Phe	Leu	Val	Ala	Tyr 140	Trp	Arg	Arg	Glu
Pro 145	Gly	Ala	Glu	Glu	His 150	Val	Lys	Met	Val	Arg	Ser 155	Gly	Gly	Ile	Pro 160
Val	His	Leu	Glu 165	Thr	Met	Glu	Pro	Gly	Ala 170	Ala	Tyr	Cys	Val	Lys 175	Ala
Gln	Thr	Phe	Val 180	Lys	Ala	Ile	Gly 185	Arg	Tyr	Ser	Ala	Phe 190	Ser	Gln	Thr
Glu	Cys	Val	Glu 195	Val	Gln	Gly	Glu 200	Ala	Thr	Val	Ala 205	Ala	Pro	Ser	Val
Phe	Ile	Phe	Pro 210	Pro	Ser	Asp 215	Glu	Gln	Leu	Lys	Ser 220	Gly	Thr	Ala	Ser
Val 225	Val	Cys	Leu	Leu	Asn 230	Asn	Phe	Tyr	Pro	Arg 235	Glu	Ala	Lys	Val	Gln 240
Trp	Lys	Val	Asp 245	Asn	Ala	Leu	Gln	Ser	Gly 250	Asn	Ser	Gln 255	Glu	Ser	Val
Thr	Glu	Gln	Asp 260	Ser	Lys	Asp	Ser 265	Thr	Tyr	Ser	Leu	Ser	Ser	Thr	Leu

Thr Leu Ser Lys Ala Asp Tyr Glu Lys His Lys Val Tyr Ala Cys Glu
275 280 285
Val Thr His Gln Gly Leu Ser Ser Pro Val Thr Lys Ser Phe Asn Arg
290 295 300
Gly Glu Cys
305

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<210> 59
<211> 201
<212> PRT
<213> Homo sapiens
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<400> 59															
Asp	Glu	Val	Ala	Ile	Leu	Pro	Ala	Pro	Gln	Asn	Leu	Ser	Val	Leu	Ser
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Thr	Asn	Met	Lys	His	Leu	Leu	Met	Trp	Ser	Pro	Val	Ile	Ala	Pro	Gly
			20					25					30		
Glu	Thr	Val	Tyr	Tyr	Ser	Val	Glu	Tyr	Gln	Gly	Glu	Tyr	Glu	Ser	Leu
		35					40					45			
Tyr	Thr	Ser	His	Ile	Trp	Ile	Pro	Ser	Ser	Trp	Cys	Ser	Leu	Thr	Glu
	50					55					60				
Gly	Pro	Glu	Cys	Asp	Val	Thr	Asp	Asp	Ile	Thr	Ala	Thr	Val	Pro	Tyr
65					70					75					80
Asn	Leu	Arg	Val	Arg	Ala	Thr	Leu	Gly	Ser	Gln	Thr	Ser	Ala	Trp	Ser
				85					90					95	
Ile	Leu	Lys	His	Pro	Phe	Asn	Arg	Asn	Ser	Thr	Ile	Leu	Thr	Arg	Pro
			100					105					110		
Gly	Met	Glu	Ile	Thr	Lys	Asp	Gly	Phe	His	Leu	Val	Ile	Glu	Leu	Glu
		115					120					125			
Asp	Leu	Gly	Pro	Gln	Phe	Glu	Phe	Leu	Val	Ala	Tyr	Trp	Arg	Arg	Glu
		130				135					140				
Pro	Gly	Ala	Glu	Glu	His	Val	Lys	Met	Val	Arg	Ser	Gly	Gly	Ile	Pro
145					150					155					160
Val	His	Leu	Glu	Thr	Met	Glu	Pro	Gly	Ala	Ala	Tyr	Cys	Val	Lys	Ala
				165					170					175	
Gln	Thr	Phe	Val	Lys	Ala	Ile	Gly	Arg	Tyr	Ser	Ala	Phe	Ser	Gln	Thr
			180					185					190		
Glu	Cys	Val	Glu	Val	Gln	Gly	Glu	Ala							
		195					200								

<210>	60
<211>	323
<212>	PRT

$\langle 400 \rangle$ 60

Asp 1	Glu	Val	Ala	Ile	Leu	Pro	Ala	Pro	Gln	Asn	Leu	Ser	Val	Leu	Ser
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Thr	Asn	Met	Lys	His	Leu	Leu	Met	Trp	Ser	Pro	Val	Ile	Ala	Pro	Gly
			20					25					30		
Glu	Thr	Val	Tyr	Tyr	Ser	Val	Glu	Tyr	Gln	Gly	Glu	Tyr	Glu	Ser	Leu
		35					40					45			
Tyr	Thr	Ser	His	Ile	Trp	Ile	Pro	Ser	Ser	Trp	Cys	Ser	Leu	Thr	Glu
	50					55				60					
Gly	Pro	Glu	Cys	Asp	Val	Thr	Asp	Asp	Ile	Thr	Ala	Thr	Val	Pro	Tyr
65				70						75					80
Asn	Leu	Arg	Val	Arg	Ala	Thr	Leu	Gly	Ser	Gln	Thr	Ser	Ala	Trp	Ser
			85						90					95	
Ile	Leu	Lys	His	Pro	Phe	Asn	Arg	Asn	Ser	Thr	Ile	Leu	Thr	Arg	Pro
		100						105					110		
Gly	Met	Glu	Ile	Pro	Lys	His	Gly	Phe	His	Leu	Val	Ile	Glu	Leu	Glu
		115					120					125			
Asp	Leu	Gly	Pro	Gln	Phe	Glu	Phe	Leu	Val	Ala	Tyr	Trp	Thr	Arg	Glu
	130					135					140				
Pro	Gly	Ala	Glu	Glu	His	Val	Lys	Met	Val	Arg	Ser	Gly	Gly	Ile	Pro
145					150					155					160
Val	His	Leu	Glu	Thr	Met	Glu	Pro	Gly	Ala	Ala	Tyr	Cys	Val	Lys	Ala
				165					170					175	
Gln	Thr	Phe	Val	Lys	Ala	Ile	Gly	Arg	Tyr	Ser	Ala	Phe	Ser	Gln	Thr
		180						185					190		
Glu	Cys	Val	Glu	Val	Gln	Gly	Glu	Ala	Gly	Gly	Gly	Gly	Ser	Gly	Gly
		195					200					205			
Gly	Gly	Ser	Gly	Gly	Gly	Gly	Ser	Arg	Thr	Val	Ala	Ala	Pro	Ser	Val
	210					215					220				
Phe	Ile	Phe	Pro	Pro	Ser	Asp	Glu	Gln	Leu	Lys	Ser	Gly	Thr	Ala	Ser
225					230					235					240
Val	Val	Cys	Leu	Leu	Asn	Asn	Phe	Tyr	Pro	Arg	Glu	Ala	Lys	Val	Gln
			245						250					255	
Trp	Lys	Val	Asp	Asn	Ala	Leu	Gln	Ser	Gly	Asn	Ser	Gln	Glu	Ser	Val
			260					265					270		
Thr	Glu	Gln	Asp	Ser	Lys	Asp	Ser	Thr	Tyr	Ser	Leu	Ser	Ser	Thr	Leu
		275					280					285			
Thr	Leu	Ser	Lys	Ala	Asp	Tyr	Glu	Lys	His	Lys	Val	Tyr	Ala	Cys	Glu
	290					295					300				
Val	Thr	His	Gln	Gly	Leu	Ser	Ser	Pro	Val	Thr	Lys	Ser	Phe	Asn	Arg
305					310					315					320

<210> 61
<211> 201
<212> PRT
<213> Homo sapiens

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<210> 62
<211> 559
<212> PRT
<213> Homo sapiens
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Leu Ser Ile Asn Met Lys Asn Val Leu Gln Trp Thr Pro Pro Glu Gly
 20 25 30
 Leu Gln Gly Val Lys Val Thr Tyr Thr Val Gln Tyr Phe Ile Tyr Gly
 35 40 45
 Gln Lys Lys Trp Leu Asn Lys Ser Glu Cys Arg Asn Ile Asn Arg Thr
 50 55 60
 Tyr Cys Asp Leu Ser Ala Glu Thr Ser Asp Tyr Glu His Gln Tyr Tyr
 65 70 75 80
 Ala Lys Val Lys Ala Ile Trp Gly Thr Lys Cys Ser Lys Trp Ala Glu
 85 90 95
 Ser Gly Arg Phe Tyr Pro Phe Leu Glu Thr Gln Ile Gly Pro Pro Glu
 100 105 110
 Val Ala Leu Thr Thr Asp Glu Lys Ser Ile Ser Val Val Leu Thr Ala
 115 120 125
 Pro Glu Lys Trp Lys Arg Asn Pro Glu Asp Leu Pro Val Ser Met Gln
 130 135 140
 Gln Ile Tyr Ser Asn Leu Lys Tyr Asn Val Ser Val Leu Asn Thr Lys
 145 150 155 160
 Ser Asn Arg Thr Trp Ser Gln Cys Val Thr Asn His Thr Leu Val Leu
 165 170 175
 Thr Trp Leu Glu Pro Asn Thr Leu Tyr Cys Val His Val Glu Ser Phe
 180 185 190
 Val Pro Gly Pro Pro Arg Arg Ala Gln Pro Ser Glu Lys Gln Cys Ala
 195 200 205
 Arg Thr Leu Lys Asp Gln Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser
 210 215 220
 Gly Gly Gly Gly Ser Ala Ser Thr Lys Gly Pro Ser Val Phe Pro Leu
 225 230 235 240
 Ala Pro Ser Ser Lys Ser Thr Ser Gly Gly Thr Ala Ala Leu Gly Cys
 245 250 255
 Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val Ser Trp Asn Ser
 260 265 270
 Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val Leu Gln Ser
 275 280 285
 Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro Ser Ser Ser
 290 295 300
 Leu Gly Thr Gln Thr Tyr Ile Cys Asn Val Asn His Lys Pro Ser Asn
 305 310 315 320
 Thr Lys Val Asp Lys Lys Val Glu Pro Lys Ser Cys Asp Lys Thr His
 325 330 335
 Thr Cys Pro Pro Cys Pro Ala Pro Glu Ala Glu Gly Ala Pro Ser Val
 340 345 350

002221 "26254250

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<210> 63
<211> 214
<212> PRT
<213> Homo sapiens
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<400> 63															
Val	Pro	Cys	Val	Ser	Gly	Gly	Leu	Pro	Lys	Pro	Ala	Asn	Ile	Thr	Phe
1				5					10					15	
Leu	Ser	Ile	Asn	Met	Lys	Asn	Val	Leu	Gln	Trp	Thr	Pro	Pro	Glu	Gly
			20					25					30		
Leu	Gln	Gly	Val	Lys	Val	Thr	Tyr	Thr	Val	Gln	Tyr	Phe	Ile	Tyr	Gly
		35					40					45			
Gln	Lys	Lys	Trp	Leu	Asn	Lys	Ser	Glu	Cys	Arg	Asn	Ile	Asn	Arg	Thr
	50					55				60					
Tyr	Cys	Asp	Leu	Ser	Ala	Glu	Thr	Ser	Asp	Tyr	Glu	His	Gln	Tyr	Tyr
65					70					75					80

Thr Ser Asp Tyr Glu His Gln Tyr Tyr Ala Lys Val Lys Ala Ile Trp
 65 70 75 80
 Gly Thr Lys Cys Ser Lys Trp Ala Glu Ser Gly Arg Phe Tyr Pro Phe
 85 90 95
 Leu Glu Thr Gln Ile Gly Pro Pro Glu Val Ala Leu Thr Thr Asp Glu
 100 105 110
 Lys Ser Ile Ser Val Val Leu Thr Ala Pro Glu Lys Trp Lys Arg Asn
 115 120 125
 Pro Glu Asp Leu Pro Val Ser Met Gln Gln Ile Tyr Ser Asn Leu Lys
 130 135 140
 Tyr Asn Val Ser Val Leu Asn Thr Lys Ser Asn Arg Thr Trp Ser Gln
 145 150 155 160
 Cys Val Thr Asn His Thr Leu Val Leu Thr Trp Leu Glu Pro Asn Thr
 165 170 175
 Leu Tyr Cys Val His Val Glu Ser Phe Val Pro Gly Pro Pro Arg Arg
 180 185 190
 Ala Gln Pro Ser Glu Lys Gln Cys Ala Arg Thr Leu Lys Asp Gln
 195 200 205

<210> 66

<211> 150

<212> PRT

<213> Homo sapiens

<400> 66

Cys Arg Asn Ile Asn Arg Thr Tyr Cys Asp Leu Ser Ala Glu Thr Ser
 1 5 10 15
 Asp Tyr Glu His Gln Tyr Tyr Ala Lys Val Lys Ala Ile Trp Gly Thr
 20 25 30
 Lys Cys Ser Lys Trp Ala Glu Ser Gly Arg Phe Tyr Pro Phe Leu Glu
 35 40 45
 Thr Gln Ile Gly Pro Pro Glu Val Ala Leu Thr Thr Asp Glu Lys Ser
 50 55 60
 Ile Ser Val Val Leu Thr Ala Pro Glu Lys Trp Lys Arg Asn Pro Glu
 65 70 75 80
 Asp Leu Pro Val Ser Met Gln Gln Ile Tyr Ser Asn Leu Lys Tyr Asn
 85 90 95
 Val Ser Val Leu Asn Thr Lys Ser Asn Arg Thr Trp Ser Gln Cys Val
 100 105 110
 Thr Asn His Thr Leu Val Leu Thr Trp Leu Glu Pro Asn Thr Leu Tyr
 115 120 125
 Cys Val His Val Glu Ser Phe Val Pro Gly Pro Pro Arg Arg Ala Gln
 130 135 140

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Pro Ser Glu Lys Gln Cys
145 150

<210> 67
<211> 196
<212> PRT
<213> Homo sapiens

<400> 67

Leu Pro Ala Pro Gln Asn Leu Ser Val Leu Ser Thr Asn Met Lys His
1 5 10 15
Leu Leu Met Trp Ser Pro Val Ile Ala Pro Gly Glu Thr Val Tyr Tyr
20 25 30
Ser Val Glu Tyr Gln Gly Glu Tyr Glu Ser Leu Tyr Thr Ser His Ile
35 40 45
Trp Ile Pro Ser Ser Trp Cys Ser Leu Thr Glu Gly Pro Glu Cys Asp
50 55 60
Val Thr Asp Asp Ile Thr Ala Thr Val Pro Tyr Asn Leu Arg Val Arg
65 70 75 80
Ala Thr Leu Gly Ser Gln Thr Ser Ala Trp Ser Ile Leu Lys His Pro
85 90 95
Phe Asn Arg Asn Ser Thr Ile Leu Thr Arg Pro Gly Met Glu Ile Thr
100 105 110
Lys Asp Gly Phe His Leu Val Ile Glu Leu Glu Asp Leu Gly Pro Gln
115 120 125
Phe Glu Phe Leu Val Ala Tyr Trp Arg Arg Glu Pro Gly Ala Glu Glu
130 135 140
His Val Lys Met Val Arg Ser Gly Gly Ile Pro Val His Leu Glu Thr
145 150 155 160
Met Glu Pro Gly Ala Ala Tyr Cys Val Lys Ala Gln Thr Phe Val Lys
165 170 175
Ala Ile Gly Arg Tyr Ser Ala Phe Ser Gln Thr Glu Cys Val Glu Val
180 185 190
Gln Gly Glu Ala
195

<210> 68
<211> 203
<212> PRT
<213> Homo sapiens

<400> 68

Asp	Glu	Val	Ala	Ile	Leu	Pro	Ala	Pro	Gln	Asn	Leu	Ser	Val	Leu	Ser
1				5					10					15	
Thr	Asn	Met	Lys	His	Leu	Leu	Met	Trp	Ser	Pro	Val	Ile	Ala	Pro	Gly
			20					25					30		
Glu	Thr	Val	Tyr	Tyr	Ser	Val	Glu	Tyr	Gln	Gly	Glu	Tyr	Glu	Ser	Leu
		35					40					45			
Tyr	Thr	Ser	His	Ile	Trp	Ile	Pro	Ser	Ser	Trp	Cys	Ser	Leu	Thr	Glu
	50					55				60					
Gly	Pro	Glu	Cys	Asp	Val	Thr	Asp	Asp	Ile	Thr	Ala	Thr	Val	Pro	Tyr
65					70					75					80
Asn	Leu	Arg	Val	Arg	Ala	Thr	Leu	Gly	Ser	Gln	Thr	Ser	Ala	Trp	Ser
			85					90						95	
Ile	Leu	Lys	His	Pro	Phe	Asn	Arg	Asn	Ser	Thr	Ile	Leu	Thr	Arg	Pro
			100					105					110		
Gly	Met	Glu	Ile	Pro	Lys	His	Gly	Phe	His	Leu	Val	Ile	Glu	Leu	Glu
		115					120					125			
Asp	Leu	Gly	Pro	Gln	Phe	Glu	Phe	Leu	Val	Ala	Tyr	Trp	Thr	Arg	Glu
	130					135				140					
Pro	Gly	Ala	Glu	Glu	His	Val	Lys	Met	Val	Arg	Ser	Gly	Gly	Ile	Pro
145					150					155					160
Val	His	Leu	Glu	Thr	Met	Glu	Pro	Gly	Ala	Ala	Tyr	Cys	Val	Lys	Ala
			165						170					175	
Gln	Thr	Phe	Val	Lys	Ala	Ile	Gly	Arg	Tyr	Ser	Ala	Phe	Ser	Gln	Thr
		180					185						190		
Glu	Cys	Val	Glu	Val	Gln	Gly	Glu	Ala	Ile	Pro					
		195					200								

<210> 69

<211> 196

<212> PRT

<213> Homo sapiens

<400> 69

Leu	Pro	Ala	Pro	Gln	Asn	Leu	Ser	Val	Leu	Ser	Thr	Asn	Met	Lys	His
1				5					10					15	
Leu	Leu	Met	Trp	Ser	Pro	Val	Ile	Ala	Pro	Gly	Glu	Thr	Val	Tyr	Tyr
			20					25					30		
Ser	Val	Glu	Tyr	Gln	Gly	Glu	Tyr	Glu	Ser	Leu	Tyr	Thr	Ser	His	Ile
		35					40					45			
Trp	Ile	Pro	Ser	Ser	Trp	Cys	Ser	Leu	Thr	Glu	Gly	Pro	Glu	Cys	Asp
	50					55					60				
Val	Thr	Asp	Asp	Ile	Thr	Ala	Thr	Val	Pro	Tyr	Asn	Leu	Arg	Val	Arg
65					70					75					80

<210> 70
<211> 135
<212> PRT
<213> Homo sapiens

<210> 71

<211> 135

<212> PRT

<213> Homo sapiens

<400> 71

Cys Ser Leu Thr Glu Gly Pro Glu Cys Asp Val Thr Asp Asp Ile Thr
 1 5 10 15
 Ala Thr Val Pro Tyr Asn Leu Arg Val Arg Ala Thr Leu Gly Ser Gln
 20 25 30
 Thr Ser Ala Trp Ser Ile Leu Lys His Pro Phe Asn Arg Asn Ser Thr
 35 40 45
 Ile Leu Thr Arg Pro Gly Met Glu Ile Pro Lys His Gly Phe His Leu
 50 55 60
 Val Ile Glu Leu Glu Asp Leu Gly Pro Gln Phe Glu Phe Leu Val Ala
 65 70 75 80
 Tyr Trp Thr Arg Glu Pro Gly Ala Glu Glu His Val Lys Met Val Arg
 85 90 95
 Ser Gly Gly Ile Pro Val His Leu Glu Thr Met Glu Pro Gly Ala Ala
 100 105 110
 Tyr Cys Val Lys Ala Gln Thr Phe Val Lys Ala Ile Gly Arg Tyr Ser
 115 120 125
 Ala Phe Ser Gln Thr Glu Cys
 130 135

<210> 72

<211> 15

<212> PRT

<213> Homo sapiens

<400> 72

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser
 1 5 10 15

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